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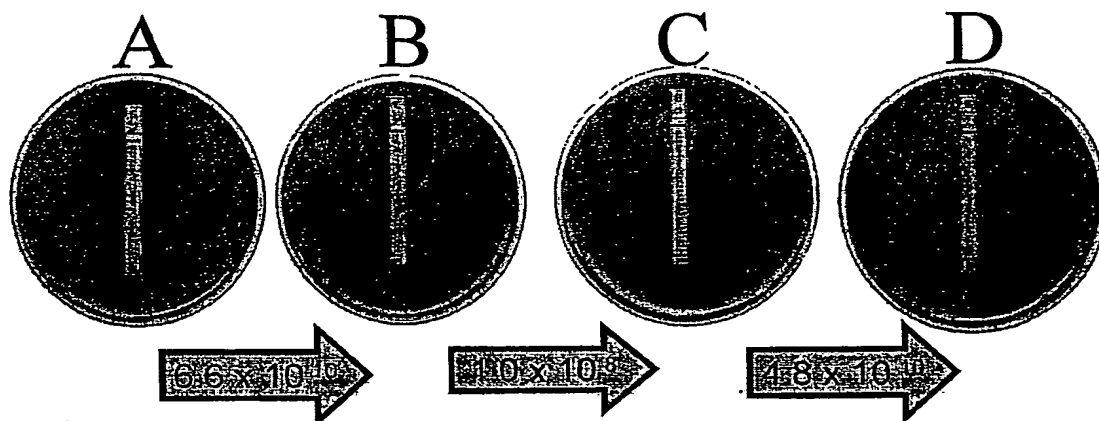
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(54) Title: MOLECULAR SIGNATURE AND ASSAY FOR FLUOROQUINOLINE RESISTANCE IN *BACILLUS ANTHRACIS*

(57) Abstract: The preferred therapeutic for human anthrax infections are therapeutics from the fluoroquinolone class, in particular, Ciprofloxacin (CIP). This invention discloses the molecular basis for fluoroquinolone (CEP in particular) action and provides the molecular signatures which form the basis of diagnostic assays. This invention further discloses nucleotide signatures associated with CIP-resistance are useful in diagnostic tests to rapidly identify CIP resistant *B. anthracis* and to infer the level of resistance of these mutant strains. According to this invention, the diagnostic potential of the molecular signatures is illustrated using a primer extension assay. Further, PCR and extension primers which allow the detection of these signatures are disclosed.



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